

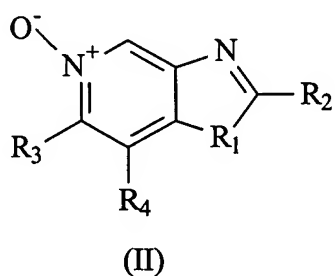
**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-23 (canceled)

24 (original) A compound of the formula II:



wherein

**R<sub>1</sub>** is selected from the group consisting of oxygen, sulfur and selenium;

**R<sub>2</sub>** is selected from the group consisting of

- hydrogen;
- alkyl;
- alkyl-OH;
- haloalkyl;
- alkenyl;
- alkyl-X-alkyl;
- alkyl-X-alkenyl;
- alkenyl-X-alkyl;
- alkenyl-X-alkenyl;
- alkyl-N(R<sub>5</sub>)<sub>2</sub>;
- alkyl-N<sub>3</sub>;
- alkyl-O-C(O)-N(R<sub>5</sub>)<sub>2</sub>;
- heterocyclyl;
- alkyl-X-heterocyclyl;

-alkenyl-X-heterocyclyl;

-aryl;

-alkyl-X-aryl;

-alkenyl-X-aryl;

-heteroaryl;

-alkyl-X-heteroaryl;

-alkenyl-X-heteroaryl;

-SO<sub>2</sub>CH<sub>3</sub>; and

-CH<sub>2</sub>-O-C(O)-CH<sub>3</sub>;

**R<sub>3</sub>** and **R<sub>4</sub>** are each independently:

-hydrogen;

-X-alkyl;

-halo;

-haloalkyl;

-N(R<sub>5</sub>)<sub>2</sub>;

or when taken together, **R<sub>3</sub>** and **R<sub>4</sub>** form a fused

aromatic, heteroaromatic, cycloalkyl or heterocyclic ring;

**X** is selected from the group consisting of -O-, -S-, -NR<sub>5</sub>-, -C(O)-, -C(O)O-, and a bond; and

each **R<sub>5</sub>** is independently H or C<sub>1-8</sub>alkyl.

25 (original) A compound selected from the group consisting of:

2-methylthiazolo[4,5-*c*]quinoline-5N-oxide;

2-ethylthiazolo[4,5-*c*]quinoline-5N-oxide;

2-propylthiazolo[4,5-*c*]quinoline-5N-oxide;

2-pentylthiazolo[4,5-*c*]quinoline-5N-oxide;

2-butylthiazolo[4,5-*c*]quinoline-5N-oxide;

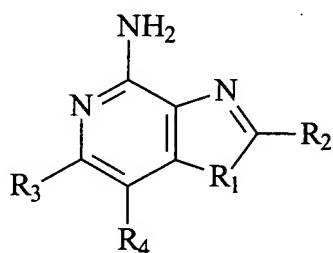
2-(1-methylethyl)thiazolo[4,5-*c*]quinoline-5N-oxide;

2-(2-phenyl-1-ethenyl)thiazolo[4,5-*c*]quinoline-5N-oxide;

2-phenylethylthiazolo[4,5-*c*]quinoline-5N-oxide;

2-methyl-1-thiazolo[4,5-*c*]quinolin-2-yl-2-propanol-5N-oxide;  
2-(ethoxymethyl)thiazolo[4,5-*c*]quinoline-5N-oxide;  
2-(methoxymethyl)thiazolo[4,5-*c*]quinoline-5N-oxide;  
2-(2-methylpropyl)thiazolo[4,5-*c*]quinoline-5N-oxide;  
2-benzylthiazolo[4,5-*c*]quinoline-5N-oxide;  
8-methyl-2-propylthiazolo[4,5-*c*]quinoline-5N-oxide; and  
2-butyloxazolo[4,5-*c*]quinoline-5N-oxide.

26 (new) A method of inducing cytokine biosynthesis in a mammal comprising administering a composition comprising a therapeutically effective amount of a compound of the formula I:



(I)

wherein:

**R<sub>1</sub>** is selected from the group consisting of oxygen, sulfur and selenium;

**R<sub>2</sub>** is selected from the group consisting of

- hydrogen;
- alkyl;
- alkyl-OH;
- haloalkyl;
- alkenyl;
- alkyl-X-alkyl;
- alkyl-X-alkenyl;
- alkenyl-X-alkyl;
- alkenyl-X-alkenyl;

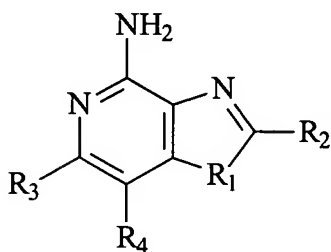
-alkyl-N(R<sub>5</sub>)<sub>2</sub>;  
 -alkyl-N<sub>3</sub>;  
 -alkyl-O-C(O)-N(R<sub>5</sub>)<sub>2</sub>;  
 -aryl;  
 -alkyl-X-aryl; and  
 -alkenyl-X-aryl;

**R**<sub>3</sub> and **R**<sub>4</sub> are taken together to form a fused heteroaromatic or heterocyclic ring;

**X** is selected from the group consisting of -O-, -S-, -NR<sub>5</sub>-, -C(O)-, -C(O)O-,  
 -OC(O)-, and a bond; and

each **R**<sub>5</sub> is independently H or C<sub>1-8</sub>alkyl; or  
 a pharmaceutically acceptable salt thereof, with a pharmaceutically acceptable carrier, to the  
 mammal.

- 27 (new) The method of claim 26 wherein the cytokine comprises IFN- $\alpha$ .
- 28 (new) The method of claim 26 wherein the cytokine comprises TNF- $\alpha$ .
- 29 (new) The method of claim 26 wherein the composition is administered topically.
- 30 (new) The method of claim 26 wherein **R**<sub>1</sub> is sulfur.
- 31 (new) A method of treating a viral disease in a mammal comprising administering a  
 composition comprising a therapeutically effective amount of a compound of the formula I:



(I)

wherein:

**R<sub>1</sub>** is selected from the group consisting of oxygen, sulfur and selenium;

**R<sub>2</sub>** is selected from the group consisting of

- hydrogen;
- alkyl;
- alkyl-OH;
- haloalkyl;
- alkenyl;
- alkyl-X-alkyl;
- alkyl-X-alkenyl;
- alkenyl-X-alkyl;
- alkenyl-X-alkenyl;
- alkyl-N(R<sub>5</sub>)<sub>2</sub>;
- alkyl-N<sub>3</sub>;
- alkyl-O-C(O)-N(R<sub>5</sub>)<sub>2</sub>;
- aryl;
- alkyl-X-aryl; and
- alkenyl-X-aryl;

**R<sub>3</sub>** and **R<sub>4</sub>** are taken together to form a fused heteroaromatic or heterocyclic ring;

**X** is selected from the group consisting of -O-, -S-, -NR<sub>5</sub>-, -C(O)-, -C(O)O-, -OC(O)-, and a bond; and

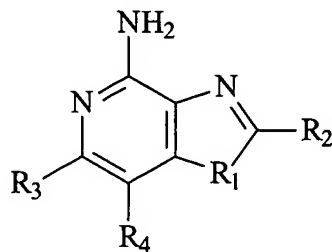
each **R<sub>5</sub>** is independently H or C<sub>1-8</sub>alkyl; or

a pharmaceutically acceptable salt thereof, with a pharmaceutically acceptable carrier, to the mammal.

32 (new) The method of claim 31 wherein the composition is administered topically.

33 (new) The method of claim 31 wherein **R<sub>1</sub>** is sulfur.

34 (new) A method of treating a neoplastic disease in a mammal comprising administering a composition comprising a therapeutically effective amount of a compound of the formula I:



(I)

wherein:

**R<sub>1</sub>** is selected from the group consisting of oxygen, sulfur and selenium;

**R<sub>2</sub>** is selected from the group consisting of

- hydrogen;
- alkyl;
- alkyl-OH;
- haloalkyl;
- alkenyl;
- alkyl-X-alkyl;
- alkyl-X-alkenyl;
- alkenyl-X-alkyl;
- alkenyl-X-alkenyl;
- alkyl-N(R<sub>5</sub>)<sub>2</sub>;
- alkyl-N<sub>3</sub>;
- alkyl-O-C(O)-N(R<sub>5</sub>)<sub>2</sub>;
- aryl;
- alkyl-X-aryl; and
- alkenyl-X-aryl;

**R<sub>3</sub>** and **R<sub>4</sub>** are taken together to form a fused heteroaromatic or heterocyclic ring;

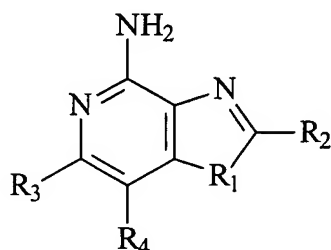
**X** is selected from the group consisting of -O-, -S-, -NR<sub>5</sub>-, -C(O)-, -C(O)O-, -OC(O)-, and a bond; and

each  $R_5$  is independently H or  $C_{1-8}$  alkyl; or  
 a pharmaceutically acceptable salt thereof, with a pharmaceutically acceptable carrier, to  
 the mammal.

35 (new) The method of claim 34 wherein the composition is administered topically.

36 (new) The method of claim 34 wherein  $R_1$  is sulfur.

37 (new) A compound of the formula I:



(I)

wherein:

$R_1$  is selected from the group consisting of oxygen, sulfur and selenium;

$R_2$  is selected from the group consisting of

- heterocyclyl;
- alkyl-X-heterocyclyl;
- alkenyl-X-heterocyclyl;
- heteroaryl;
- alkyl-X-heteroaryl; and
- alkenyl-X-heteroaryl;

$R_3$  and  $R_4$  are taken together to form a fused heteroaromatic or heterocyclic ring;

X is selected from the group consisting of  $-O-$ ,  $-S-$ ,  $-NR_5-$ ,  $-C(O)-$ ,  $-C(O)O-$ ,  $-OC(O)-$ , and a bond; and

each  $R_5$  is independently H or  $C_{1-8}$  alkyl; or

a pharmaceutically acceptable salt thereof.

38 (new) A compound according to claim 37 wherein R<sub>1</sub> is oxygen or sulfur.

39 (new) A compound according to claim 37 wherein R<sub>2</sub> is heterocyclyl.

40 (new) A compound according to claim 37 wherein R<sub>2</sub> is selected from the group consisting of morpholinyl, piperidinyl, and pyrrolidinyl.

41 (new) A compound according to claim 37 wherein R<sub>1</sub> is sulfur.

42 (new) A compound according to claim 37 wherein R<sub>3</sub> and R<sub>4</sub> are taken together to form a substituted or unsubstituted pyridine ring.

43 (new) A compound according to claim 38 wherein R<sub>3</sub> and R<sub>4</sub> are taken together to form a substituted or unsubstituted pyridine ring.

44 (new) A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 37 or a pharmaceutically acceptable salt thereof, with a pharmaceutically acceptable carrier.

45 (new) A method of inducing cytokine biosynthesis in a mammal comprising administering a composition of claim 44 to the mammal.

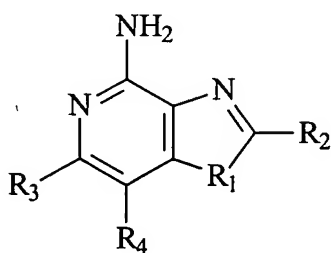
46 (new) The method of claim 45 wherein the cytokine comprises IFN- $\alpha$ .

47 (new) The method of claim 45 wherein the cytokine comprises TNF- $\alpha$ .

48 (new) The method of claim 45 wherein the composition is administered topically.



- 49 (new) The method of claim 45 wherein  $R_1$  is sulfur.
- 50 (new) A method of treating a viral disease in a mammal comprising administering a composition of claim 44 to the mammal.
- 51 (new) The method of claim 50 wherein the composition is administered topically.
- 52 (new) The method of claim 50 wherein  $R_1$  is sulfur.
- 53 (new) A method of treating a neoplastic disease in a mammal comprising administering a composition of claim 44 to the mammal.
- 54 (new) The method of claim 53 wherein the composition is administered topically.
- 55 (new) The method of claim 53 wherein  $R_1$  is sulfur.
- 56 (new) A compound of the formula I:



(I)

wherein:

$\text{R}_1$  is selected from the group consisting of oxygen, sulfur and selenium;

$\text{R}_2$  is selected from the group consisting of

- hydrogen;
- alkyl;
- alkyl-OH;

-haloalkyl;  
-alkenyl;  
-alkyl-X-alkyl;  
-alkyl-X-alkenyl;  
-alkenyl-X-alkyl;  
-alkenyl-X-alkenyl;  
-alkyl-N(R<sub>5</sub>)<sub>2</sub>;  
-alkyl-N<sub>3</sub>;  
-alkyl-O-C(O)-N(R<sub>5</sub>)<sub>2</sub>;  
-heterocyclyl;  
-alkyl-X-heterocyclyl;  
-alkenyl-X-heterocyclyl;  
-aryl;  
-alkyl-X-aryl;  
-alkenyl-X-aryl;  
-heteroaryl;  
-alkyl-X-heteroaryl; and  
-alkenyl-X-heteroaryl;

**R<sub>3</sub>** and **R<sub>4</sub>** are taken together to form a fused cycloalkyl ring;

**X** is selected from the group consisting of -O-, -S-, -NR<sub>5</sub>-, -C(O)-, -C(O)O-,  
-OC(O)-, and a bond; and

each **R<sub>5</sub>** is independently H or C<sub>1-8</sub> alkyl; or  
a pharmaceutically acceptable salt thereof.

57 (new) A compound according to claim 56 wherein **R<sub>1</sub>** is oxygen or sulfur.

58 (new) A compound according to claim 56 wherein **R<sub>2</sub>** is C<sub>1-4</sub> alkyl.

59 (new) A compound according to claim 57 wherein **R<sub>2</sub>** is C<sub>1-4</sub> alkyl.

- 60 (new) A compound according to claim 56 wherein  $R_1$  is sulfur.
- 61 (new) A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 56 or a pharmaceutically acceptable salt thereof, with a pharmaceutically acceptable carrier.
- 62 (new) A method of inducing cytokine biosynthesis in a mammal comprising administering a composition of claim 61 to the mammal.
- 63 (new) The method of claim 62 wherein the cytokine comprises IFN- $\alpha$ .
- 64 (new) The method of claim 62 wherein the cytokine comprises TNF- $\alpha$ .
- 65 (new) The method of claim 62 wherein the composition is administered topically.
- 66 (new) The method of claim 62 wherein  $R_1$  is sulfur.
- 67 (new) A method of treating a viral disease in a mammal comprising administering a composition of claim 61 to the mammal.
- 68 (new) The method of claim 67 wherein the composition is administered topically.
- 69 (new) The method of claim 67 wherein  $R_1$  is sulfur.
- 70 (new) A method of treating a neoplastic disease in a mammal comprising administering a composition of claim 61 to the mammal.
- 71 (new) The method of claim 70 wherein the composition is administered topically.
- 72 (new) The method of claim 70 wherein  $R_1$  is sulfur.